Please amend the application as follows:

In the Claims

Please amend Claims 1, 9, 14, 22 and 30. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - ii).

1. (Amended) A fluid sterilization apparatus comprising:

a sterilization chamber having a cavity therein;

a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity; and

an electron beam generator having an exit window, the electron beam generator being mounted to the sterilization chamber for directing a beam of electrons through the exit window into the cavity to the sterilization chamber to irradiate the spray of fluid, the nozzle and cavity being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

9. (Amended) A fluid sterilization apparatus comprising:

a sterilization chamber having a cavity therein;

a nozzle for receiving pressurized fluid and for directing a spray of the fluid into the cavity, the spray of the fluid being a thin, flat, film of fluid; and

an electron beam generator having an exit window, the electron beam generator being mounted to the sterilization chamber for directing a beam of electrons through the exit window into the cavity of the sterilization chamber to irradiate the spray of fluid, the nozzle and cavity being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

14. (Amended) A method of forming a fluid sterilization apparatus comprising:

providing a sterilization chamber having a cavity therein;

forming a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity; and

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mounting an electron beam generator to the sterilization chamber, the electron beam generator having an exit window and for directing a beam of electrons through the exit window into the cavity of the sterilization chamber to irradiate the spray of fluid, the nozzle and cavity being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

22. (Amended) A method of sterilizing fluid comprising:

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directing a spray of pressurized fluid from a nozzle assembly into a cavity of a sterilization chamber; and

irradiating the spray of fluid with a beam of electrons from an electron beam generator mounted to the sterilization chamber, the electron beam generator having an exit window through which the beam of electrons is directed, the nozzle and cavity being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

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30. (Amended) The method of Claim 28 further comprising directing any fluid into the recycling passage that is unable to pass over a wall within the cavity between the cavity outlet and the recycling passage.

Please add new Claims 37-53 as follows.

37. (New) A fluid sterilization apparatus comprising:

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a sterilization chamber having a cavity therein;

a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity;

an electron beam generator having an exit window, the electron beam generator being mounted to the sterilization chamber for directing a beam of electrons through the exit window into the cavity to the sterilization chamber to irradiate the spray of fluid, the

nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window; and

a pump for pumping the fluid.

38. (New) The apparatus of Claim 37 further comprising a filter for filtering particles from the fluid.

39. (New) A fluid sterilization apparatus comprising:

a sterilization chamber having a cavity therein;

a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity, the nozzle directing a thin, flat film of fluid about .004 to .005 inches thick within the sterilization chamber; and

an electron beam generator having an exit window, the electron beam generator being mounted to the sterilization chamber for directing a beam of electrons through the exit window into the cavity to the sterilization chamber to irradiate the spray of fluid, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

40. (New) A fluid sterilization apparatus comprising:

a sterilization chamber having a cavity therein;

a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity, the nozzle directing a thin, flat film of fluid within the sterilization chamber;

an electron beam generator having an exit window, the electron beam generator being mounted to the sterilization chamber for directing a beam of electrons through the exit window into the cavity to the sterilization chamber to irradiate the spray of fluid, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window; and

the cavity of the sterilization chamber including an outlet through which fluid that is sterilized is removed and a recycling passage for directing a portion of the spray of fluid back for further irradiation.

41. (New) The apparatus of Claim 40 in which the cavity includes a wall between the cavity outlet and the recycling passage for directing any fluid from the spray of fluid unable to pass over the wall into the recycling passage.

42. (New) A fluid sterilization apparatus comprising:

a sterilization chamber having a cavity therein;

a nozzle for receiving pressurized fluid and for directing a spray of the fluid into the cavity, the spray of the fluid being a thin, flat, film of fluid about .004 to .005 inches thick; and

an electron beam generator mounted to the sterilization chamber for directing a beam of electrons into the cavity of the sterilization chamber to irradiate the spray of fluid.

43. (New) A method of forming a fluid sterilization apparatus comprising:

providing a sterilization chamber having a cavity therein;

forming a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity;

mounting an electron beam generator to the sterilization chamber, the electron beam generator having an exit window and for directing a beam of electrons through the exit window into the cavity of the sterilization chamber to irradiate the spray of fluid, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window; and

providing a pump for pumping the fluid.

44. (New) The method of Claim 43 further comprising providing a filter for filtering particles from the fluid.

45. (New) A method of forming a fluid sterilization apparatus comprising:

providing a sterilization chamber having a cavity therein;

forming a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity, the nozzle capable of producing a thin, flat film of fluid about .004 to .005 inches thick; and

mounting an electron beam generator to the sterilization chamber, the electron beam generator having an exit window and for directing a beam of electrons through the exit window into the cavity of the sterilization chamber to irradiate the spray of fluid, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

46. (New) A method of forming a fluid sterilization apparatus comprising:

providing a sterilization chamber having a cavity therein;

forming a nozzle for receiving pressurized fluid and directing a spray of the fluid into the cavity, the nozzle capable of forming a thin, flat film of fluid;

mounting an electron beam generator to the sterilization chamber, the electron beam generator having an exit window and for directing a beam of electrons through the exit window into the cavity of the sterilization chamber to irradiate the spray of fluid, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window;

forming the cavity of the sterilization chamber with an outlet through which fluid that is sterilized is removed; and

forming a recycling passage in the cavity of the sterilization chamber for directing a portion of the spray of fluid back for further irradiation.

47. (New) The method of Claim 46 further comprising forming a wall within the cavity between the cavity outlet and the recycling passage for directing any fluid from the spray of fluid unable to pass over the wall into the recycling passage.

48. (New) A method of sterilizing fluid comprising:

directing a spray of pressurized fluid from a nozzle assembly into a cavity of a sterilization chamber;

irradiating the spray of fluid with a beam of electrons from an electron beam generator mounted to the sterilization chamber, the electron beam generator having an exit window through which the beam of electrons is directed, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window; and

pumping the fluid to the nozzle assembly with a pump.

49. (New) The method of Claim 48 further comprising filtering particles from the fluid with a filter.

50. (New) A method of sterilizing fluid comprising:

directing a spray of pressurized fluid from a nozzle assembly into a cavity of a sterilization chamber, the spray of fluid being a thin, flat film of fluid about .004 to .005 inches thick; and

irradiating the spray of fluid with a beam of electrons from an electron beam generator mounted to the sterilization chamber, the electron beam generator having an exit window through which the beam of electrons is directed, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window.

51. (New) A method of sterilizing fluid comprising:

directing a spray of pressurized fluid from a nozzle assembly into a cavity of a sterilization chamber, the spray of fluid being a thin, flat film of fluid;

irradiating the spray of fluid with a beam of electrons from an electron beam generator mounted to the sterilization chamber, the electron beam generator having an exit window through which the beam of electrons is directed, the nozzle being configured to direct the spray of fluid substantially parallel and proximate to the exit window;

removing fluid that is sterilized from the cavity of the sterilization chamber through an outlet; and

recycling a portion of the spray of fluid back for further irradiation through a recycling passage.